

Under the

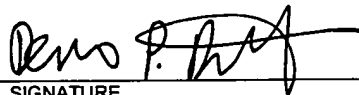
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER 27.US2.PCT
INTERNATIONAL APPLICATION NO. PCT/US2003/023296		U.S. APPLICATION NO. (If known, file 37 CFR 1.5) 10/323100
INTERNATIONAL FILING DATE July 25, 2003		PRIORITY DATE CLAIMED August 1, 2002
TITLE OF INVENTION Human G Protein-Coupled Receptor and Modulators Thereof for the Treatment of Ischemic Heart Disease and Congestive Heart Failure		
APPLICANT(S) FOR DO/EO/US John W. Adams and Daniel T. Connolly		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</p> <p>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> has been communicated by the International Bureau.</p> <p>c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US)</p> <p>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).</p> <p>a. <input type="checkbox"/> is attached hereto.</p> <p>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</p> <p>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</p> <p>b. <input type="checkbox"/> have been communicated by the International Bureau.</p> <p>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p>d. <input checked="" type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</p> <p>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p>		
Items 11 to 20 below concern document(s) or information included:		
<p>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</p> <p>13. <input checked="" type="checkbox"/> A preliminary amendment.</p> <p>14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</p> <p>15. <input type="checkbox"/> A substitute specification.</p> <p>16. <input checked="" type="checkbox"/> A power of attorney and/or address letter. – included on the Declaration</p> <p>17. <input checked="" type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.</p> <p>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</p> <p>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</p> <p>20. <input checked="" type="checkbox"/> Other items or information: Paper copy of Sequence Listing; Sequence Submission Statement; Recordation Form Cover Sheet</p>		

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/523100		INTERNATIONAL APPLICATION NO. PCT/US2003/023296		ATTORNEY'S DOCKET NUMBER 27.US2.PCT	
21. The following fees are submitted: <input checked="" type="checkbox"/> a) Basic national fee.....\$300.00 <input checked="" type="checkbox"/> b) Examination fee.....\$200.00 <input checked="" type="checkbox"/> c) Search fee.....\$500.00 TOTAL OF ABOVE CALCULATIONS = \$1000.00				Applicant use	Office use only
				\$ 300.00	
				\$ 200.00	
				\$ 500.00	
				\$1,000.00	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof					
Total Sheets	Extra sheets	Number of each 50 or fraction thereof (round up to a whole number)	RATE		
106 - 100 =	6/ 50 =	1	x \$250.00	\$ 250.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$	
Total Claims	24 - 20 =	4	x \$50.00	\$ 200.00	
Independent Claims	3 - 3 =	0	x \$200.00	\$	
MULTIPLE DEPENDENT CLAIMS(S) (if applicable)			+ \$300.00	\$	
TOTAL OF ABOVE CALCULATIONS =				\$1,450.00	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.				\$ 725.00	
SUBTOTAL =				\$ 725.00	
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	
TOTAL NATIONAL FEE =				\$ 725.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$ 40.00	
TOTAL FEES ENCLOSED =				\$ 765.00	
Amount to be refunded:					\$
Amount to be charged:					\$
a. <input type="checkbox"/> A check in the amount of \$_____ to cover the above fees is enclosed. b. <input checked="" type="checkbox"/> Please charge my Deposit Account No.50-1441 in the amount of <u>\$1,265.00</u> to cover the above fees. A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-1441. A duplicate copy of this sheet is enclosed. d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO:					
Arena Pharmaceuticals, Inc. 6166 Nancy Ridge Drive San Diego, CA 92121-3223					
				 SIGNATURE	
				Deno P. Dialynas NAME	
				50,711 REGISTRATION NUMBER	

Telephone: (858) 453-7200, x. 1440
E-Mail: ddialynas@arenapharm.com

January 31, 2005

Express Mail Label No. EV 332847820 US

Mail Stop: PCT
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

RE: U.S. National Phase Patent Application of
Serial No. PCT/US03/023296
For: "HUMAN G PROTEIN-COUPLED RECEPTOR AND MODULATORS
THEREOF FOR THE TREATMENT OF ISCHEMIC HEART DISEASE
AND CONGESTIVE HEART FAILURE"
Inventors: John W. Adams and Daniel T. Connolly
Our Ref.: 27.US2.PCT

Dear Sir:

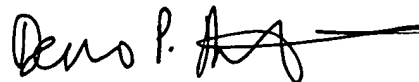
Enclosed please find the above-identified U.S. National Phase application under 35 U.S.C. 371 for filing with the United States Patent and Trademark Office. The applicant claims Small Entity status. The following documents are transmitted herewith:

	<u>Quantity</u>
1) Transmittal Letter to the U.S. Designated/Elected Office (DO/EO/US) Concerning a Filing Under 35 U.S.C. 371	2 Pages
2) Declaration and Power of Attorney	5 Pages
3) Assignment and Recordation Form Cover Sheet	4 Pages
4) Preliminary Amendment	7 Pages
5) Application Data Sheet	4 Pages
6) Sequence Submission Statement	1 Page
7) Paper Copy of Sequence Listing	10 Pages
8) Diskette containing Sequence Listing	
9) Authorization to charge Deposit Account 50-1441 in the amount of \$765.00 for the filing fee - (see Transmittal Sheet)	
10) Return Receipt Postcard	

The Commissioner is hereby authorized to charge any additional fees, or credit any overpayment in the processing of these documents to our Deposit Account No. 50-1441.

Very truly yours,

ARENA PHARMACEUTICALS, INC.

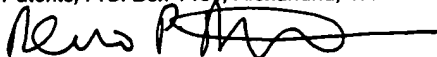


Deno P. Dialynas
Reg. No. 50,711

DPD / lal
Enclosures

Certificate of Mailing under 37 CFR 1.10

Express Mail Label No.: EV 332847820 US Date of Deposit: January 31, 2005
I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10, on the Date of Deposit shown above, postage prepaid and is addressed to Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



Signature Deno P. Dialynas

Best Available Cr